

● 면역억제제가 치주조직에 미치는 영향에 관한 연구

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서울대학교병원 일반외과에서 신장이식을 받고 각각 azathioprine과 cyclosporin을 corticosteroid와 병용하는 환자와 만성신부전증으로 혈액투석중인 환자의 치주조직 상태를 비교하여 다음과 같은 결론을 얻었다.

1. 치은염증은 azathioprine군에서 가장 심하였으며($P < 0.01$), 만성신부전증환자군과 cyclosporin 군은 통계학적 차이가 없었다.
2. 4mm이상의 치주낭은 azathioprine군에서 가장 많았고($P < 0.01$), cyclosporin군과 만성신부전증 환자군의 순이었으나 통계학적 차이는 없었다.
3. cyclosporin에 의한 치은증식은 59%의 환자에서 관찰할 수 있었으며, 전치부에서 가장 많이 나타났고, 대구치가 가장 심한 증식을 보였다.

● 교정용 탄성사 결찰이 성견 치근분지부 조직변화에 미치는 실험적 연구

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저자는 교정용 탄성사 장착으로 인한 급속한 치태증가에 따른 치근분지부에서 치주질환 진행 과정과 조직변화 양상을 조사하기 위해 교정용 탄성사를 상악 좌우측 3, 4번 소구치 치근분지부 부위에 장착후, 8마리의 성견에서 실험 치주염을 유도하였다.

실험 0, 3일, 1, 2, 4, 8, 12, 14주에 임상소견을 측정하고 실험부위를 적출하여 방사선 사진촬영을 하였으며 통법에 따라 Hematoxylin과 Eosin으로 염색한 후 임의로 선택된 각군 표본에서 치근분지부 치주조직 파괴양상을 조직학적으로 관찰하여 다음과 같은 결론을 얻었다.

1. 임상적으로, 치은부종, 발적 및 탐침시 출혈이 실험 3일에 나타났으며 시간이 경과함에 따라 심화되는 양상과 함께 14주에는 치근분지부에서 화농성 배출물을 볼 수 있었다. 또한 탐침시 협설축으로 관통된 Glickman 3, 4급 병소는 12주부터 관찰할 수 있었다.
2. 방사선학적으로, 분지부 치조골소실은 실험 2주에 나타났으며 14주에는 증가된 삼각형의 방사선 투과성 병소를 관찰할 수 있었다.
3. 실험 3일에 나타난 급성염증반응은 실험기간이 지남에 따라 형질세포가 주를 이루는 만성상태로 전이되었으며 염증세포 침윤양상은 하부결체조직과 치조골쪽으로 확장되었다.
4. 조직학적으로, 염증반응과 관련된 활발한 파골세포 증가와 함께 골파괴가 실험 1주에 나타났으며 시간이 경과함에 따라 점차 증가했다.
5. 조직학적으로, 케양을 동반한 상피이주가 1주에 시작되어 12주에는 치근분지부 하방으로 확장되었다.

The comparative study of immunosuppressive drugs on the periodontal condition in renal trasplant patients

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The periodontal condition of 22 patients on cyclosporin therapy and 12 patients on azathioprine therapy after renal transplantation was compared with that of 10 prospective renal transplant patients. Significant correlation was observed for plaque scores of gingival inflammation in renal transplant group, but not in chronic renal failure failure group ($p < 0.01$). Patients on azathioprine therapy had significantly more gingival inflammation and pocket depth greater than 3 mm than those of cyclosporin and chronic renal group ($p < 0.01$).

Gingival hyperplasia was observed in 13 of 22 patients on cyclosporin therapy and one patient on azathioprine therapy. Gingival hyperplasia associated with cyclosporin therapy ocured more in the anterior than in the posterior segments, although the degree was more severe in the posterior segments ($p < 0.05$).

A significant correlation ($r = 0.557$, $p < 0.05$) was observed between the duration of cyclosporin therapy and the increase in gingival hyperplasia, but not the duration of immunosuppressive therapy and the severity of gingival inflammation or pocket fomation.

An experimental study of interradicular tissue change induced by the orthodontic elastic bands in dogs

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The purpose of this study was to evaluate the histopathologic tissue change in the interradicular area induced by the orthodontic elastic bands in eight dogs. Orthodontic elastic bands were placed around the crowns of upper third and fourth and fourth premolars for day of 0, 3 and 1, 2, 4, 8, 12, 14 weeks and the experimental periodontitis were produced.

After the coinical and radiographic observations were recorded, block biopsies were taken in each group and prepared with hematoxylin-eosin stain for microscopic study.

The results were as follow:

1. Clinically, the swollen gingiva with redness and the bleeding upon probing appeared at 3 day, and the suppurative exudate was seen at 14 week. In addition, grade III, IV according to Glickman's classification could be observed at 12 week.
2. Radiologically, the loss alveolar bone in furcation area appeared at 2 week, increased with time and triangular-shaped radiolucency could be seen at 14 week.

3. Acute inflammatory reaction was induced at 3 day and converted to plasma cell-rich chronic state with time and inflammatory cell infiltration extended to the supracrestal connective tissue and alveolar bone.
4. Microscopically, rapid destruction of the interradicular bone at 1 week was the consequence of highly active osteoclast associated with the inflammatory reaction and increased in the course of the experimental periods.
 Microscopically, the epithelium with ulceration was migrated at 1 week, and completely covered in furcation area at 12 week.

Changes in dentinal hypersensitivity after scaling and root planing

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This study was undertaken to observe changes in dentinal hypersensitivity after scaling and root planing, and thereby provided the reference for determining start time of desensitizing procedures, if needed. In this experiment, ten patients who needed scaling and root planing to treat the gingivitis and beginning or moderate periodontitis. They had not experienced desensitizing treatments and did not have scaling and root planing in 6 months. Before scaling and root planing, probing depth, gingival recession, plaque index, sulcus bleeding index and calculus index were recorded.

Then, hypersensitivity scores and electric pulp test (EPT) scores were taken from 232 teeth. Hypersensitivity score was the sum of pain scores to mechanical stimuli (probe tip), air blasts from dental syringe, and 7°C water stimuli. EPT scores were the scale of Vitality Scanner (Analytic Technology) when the patients first felt discomfort.

And at next day, scaling and root planing was done with Gracey curettes. patients were instructed to brush their teeth by Modified-Bass method for three minutes twice a day with new toothbrush and new dentifrices which contains no desensitizing agents. At 1, 2, 3, 4, 5, 6, 7, 10, and 14 days after scaling and root planing the hypersensitivity scores and EPT scores were recorded.

The following results were obtained.

1. Dentinal hypersensitivity increased significantly one day after scaling and root planing and continued for 2-3 days ($P < 0.01$).
2. Increased dentinal hypersensitivity after scaling and root planing decreased rapidly to 5th day and slowly thereafter ($P < 0.01$).
3. Changes in dentinal hypersensitivity may be estimated with relative accuracy by cold water stimulus.
4. Dentinal hypersensitivity may not be estimated by electric pulp testers.